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10/594,145

09/26/2006

Jun Hashimoto

50478-4200

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06/23/2008

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SUITE 1400

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EXAMINER

HOLLWEG, THOMAS A

ART UNIT

PAPER NUMBER

2879

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | | |
|------------------------------|--------------------------------------|---|--|
| Office Action Summary | Application No. 10/594,145 | Applicant(s) HASHIMOTO ET AL. | |
| | Examiner Thomas A. Hollweg | Art Unit 2879 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 November 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 September 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>9/26/2006, 11/6/2006</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statements (IDS) submitted on September 26, 2006, and November 6, 2006, are in compliance with the provisions of 37 CFR 1.97.

Accordingly, the information disclosure statement is being considered by the examiner.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 2 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

4. Claim 1 limits the amount of H contained in the protection layer between 10,000 mass ppm and 300 mass ppm. Claim 2 limits this amount to "a range of less than 1500 mass ppm." It is not clear whether the range defined in claim 2 has a lower limit at 300 mass ppm or 0 mass ppm. Examiner notes that including the values from 0 mass ppm to 299 mass ppm in claim 2 would not be permitted because this would broaden the independent claim on which claim 2 is dependent. For purpose of examination it is assumed that the range defined in claim 2 is between 1500 mass ppm and 300 mass ppm.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1, 2, 5, 8 and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by Ito et al., Patent Abstracts of Japan No. 2002/033053.

7. With regard to claim 1, in figure 16 Ito discloses a gas discharge display panel comprising a substrate (102), a dielectric layer (112), and a protective layer (114), the dielectric layer (112) and the protective layer (114) being formed in the stated order on a surface of the substrate (102), wherein the protective (114) layer contains H in a range of 300 mass ppm to 10000 mass ppm inclusive with respect to a MgO content of the protective layer (114) [0004-0010, 0025-0028, 0071-0072].

8. With regard to claim 2, in figure 16, Ito discloses that the H content of the protective layer is in a range of less than 1500 mass ppm with respect to the MgO content [0025-0028, 0071-0072].

9. With regard to claim 5, in figure 16, Ito discloses a gas discharge display panel comprising a substrate (102), a dielectric layer (112), and a protective layer (113), the dielectric layer (112) and the protective layer (114) being formed in the stated order on a surface of the substrate (102). The disclosed protective layer (114) is comprised of the same materials in the same proportions as applicant's protective layer, so when the protective layer (114) is subjected to a cathodoluminescence spectroscopy, a relative area intensity of a first intensity with respect to a second intensity for a light emission peak area is in a range of 0.6 to 1.5 inclusive, where the first intensity is a light emission peak intensity generated in a wavelength range of 720 nm or above and below 770 nm

and the second intensity is a light emission peak intensity generated in a wavelength range of 300 nm or above and below 450 nm [0004-0010, 0025-0028, 0045-0050].

10. With regard to claim 6, in figure 16, Ito discloses that the protective layer (114) contains H in addition to MgO [0025-0028, 0071-0072].

11. With regard to claim 8, in figure 16, Ito discloses a gas discharge display panel comprising a substrate (102), a dielectric layer (112), and a protective layer (114), the dielectric layer (112) and the protective layer (114) being formed in the stated order on a surface of the substrate (102). The disclosed protective layer (114) is comprised of the same materials in the same proportions as applicant's protective layer, so when the protective layer (114) is subjected to a cathodoluminescence spectroscopy, a relative area intensity of a second intensity with respect to a third intensity for a light emission peak area is in a range of 0.9 or above, where the second intensity is a light emission peak intensity generated in a wavelength range of 450 nm or above and below 600 nm and the third intensity is a light emission peak intensity generated in a wavelength range of 300 nm or above and below 450 nm [0004-0010, 0025-0028, 0045-0050].

12. With regard to claim 9, in figure 16, Ito discloses that the protective layer (114) contains H in addition to MgO [0025-0028, 0071-0072].

Claim Rejections - 35 USC § 103

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

14. Claims 3, 4, 7, 10 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ito as applied to claims 1, 5 and 8 above, and further in view of Hasegawa et al., Patent Abstracts of Japan No. 2004-031264.

15. With regard to claim 3, Ito discloses all of the limitations, as discussed in the rejection of claim 1 above, except Ito does not expressly disclose that the protective layer further contains Si.

16. Hasegawa, in figure 1, teaches a gas discharge display having a protective layer comprised of MgO and Si in a range of 20 mass ppm to 5000 mass ppm inclusive with respect to the MgO content [0007-0012].

17. At the time of invention, it would have been obvious for a person having ordinary skill in the art to construct the Ito gas discharge display where the protective layer further contains Si in a range of 20 mass ppm to 5000 mass ppm inclusive with respect to the MgO content, as taught by Hasegawa, to prevent the adsorption of carbon dioxide and water into the protective layer and prevent impurity gas from generating in the discharge space [0009].

18. With regard to claim 4, Ito discloses all of the limitations, as discussed in the rejection of claim 1 above, except Ito does not expressly disclose that the protective layer further contains Ge.

19. Hasegawa, in figure 1, teaches a gas discharge display having a protective layer comprised of MgO and Ge in a range of 10 mass ppm or above and below 500 mass ppm with respect to the MgO content [0007-0012].

20. At the time of invention, it would have been obvious for a person having ordinary skill in the art to construct the Ito gas discharge display where the protective layer further contains Ge in a range of 10 mass ppm or above and below 500 mass ppm with respect to the MgO content, as taught by Hasegawa, to suppress discharge delay and improve response in generating discharge [0007].

21. With regard to claim 7, Ito discloses all of the limitations, as discussed in the rejection of claim 5 above, including that the protective layer contains H and MgO [0025-0028]. However, Ito does not expressly disclose that the protective layer further contains Si.

22. Hasegawa, in figure 1, teaches a gas discharge display having a protective layer comprised of MgO and Si in a range of 20 mass ppm to 5000 mass ppm inclusive with respect to the MgO content [0007-0012].

23. At the time of invention, it would have been obvious for a person having ordinary skill in the art to construct the Ito gas discharge display where the protective layer further contains Si in a range of 20 mass ppm to 5000 mass ppm inclusive with respect to the MgO content, as taught by Hasegawa, to prevent the adsorption of carbon dioxide and water into the protective layer and prevent impurity gas from generating in the discharge space [0009].

24. With regard to claim 10, Ito discloses all of the limitations, as discussed in the rejection of claim 8 above, including that the protective layer contains H and MgO [0025-0028]. However, Ito does not expressly disclose that the protective layer further contains Ge.

25. Hasegawa, in figure 1, teaches a gas discharge display having a protective layer comprised of MgO and Ge content is in a range of 10 mass ppm to 300 mass ppm inclusive with respect to the MgO content [0007-0012].

26. At the time of invention, it would have been obvious for a person having ordinary skill in the art to construct the Ito gas discharge display where the protective layer further contains Ge content is in a range of 10 mass ppm to 300 mass ppm inclusive with respect to the MgO content, as taught by Hasegawa, to suppress discharge delay and improve response in generating discharge [0007].

27. With regard to claim 11, Ito and Hasegawa disclose all of the limitations, as discussed in the rejection of claim 7 above. However, Ito does not expressly disclose that the protective layer further contains Ge.

28. Hasegawa, in figure 1, teaches a gas discharge display having a protective layer comprised of MgO and Ge content is in a range of as little as 300 mass ppm with respect to the MgO content [0007-0012]. It has been held that, a *prima facie* case of obviousness exists where the claimed ranges and prior art ranges do not overlap but are close enough that one skilled in the art would have expected them to have the same properties. (*Titanium Metals Corp. of America v. Banner*, 778 F.2d 775, 227 USPQ 773 (Fed. Cir. 1985); MPEP 2144.05) Here, one having ordinary skill would understand that the claimed range and the range taught by Hasegawa are close enough that they would be expected to produce the same properties in the protective layer.

29. Therefore, at the time of invention, it would have been obvious for a person having ordinary skill in the art to construct the Ito gas discharge display where the

protective layer further contains Ge in a range of 10 mass ppm or above and below 300 mass ppm with respect to the MgO content, to suppress discharge delay and improve response in generating discharge, as taught by Hasegawa [0007].

Conclusion

30. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thomas A. Hollweg whose telephone number is (571) 270-1739. The examiner can normally be reached on Monday through Friday 7:30am-5:00pm E.S.T..

31. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimesh Patel can be reached on (571) 272-2457. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

32. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/TH/

/Nimeshkumar Patel/
Supervisory Patent Examiner, Art Unit 2879